

# Badges of Rank and Achievement



## STALKING



## BOY SCOUTS OF AMERICA

TWO PARK AVENUE  
NEW YORK N.Y.





## STALKING



## HOW TO TRACK AND TRAIL ANIMALS, BIRDS AND PERSONS

PREPARED BY THE EDITORIAL SERVICE

NEW EDITION

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# STALKING

## REQUIREMENTS

To obtain a Merit Badge for Stalking, a Scout must:	2, 5, 6
1. Demonstrate by means of a stalking game or otherwise, ability to stalk skillfully in shelter and wind, etc., showing how to proceed noiselessly and "freeze" when occasion demands.	7, 38 8-10
2. Know and recognize the tracks of ten different kinds of animals or birds in his vicinity, three of which may be domestic.	2- 3 12-13 16-34
3. Submit satisfactory evidence that he has trailed two different kinds of wild animals or birds on ordinary ground far enough to determine the direction in which they were going, and their gait or speed. Give the names of animals or birds trailed, their direction of travel, and describe gait or speed; or submit satisfactory evidence that he has trailed six different kinds of wild animals or birds in snow, sand, dust, or mud, far enough to determine the direction they were going and their gait or speed. Give names of animals or birds, their direction of travel, and describe gait or speed.	15
4. Submit satisfactory evidence that he has tracked a human being and deducted from the trail whether it was man or woman, young or old, the gait or speed, and also give any other information deduced.	1-6
5. Submit evidence that he has scored at least 30 points from the following groups: Group (f) and 4 of the 5 groups (a), (b), (c), (d), (e) must be represented in the score of 30 and at least 7 points must be scored from (a), (b), or (c). Make clear recognizable photographs of	
(a) Live bird away from nest.....	4 points each
(b) Live woodchuck or smaller wild animal .....	3 " "
(c) Live wild animal larger than woodchuck .....	4 " "
(d) Live bird on nest .....	3 " "
(e) Tracks of live wild animal or bird. 2 " "	16-34
and	
(f) Make satisfactory plaster cast of wild animal or bird tracks with identification imprint on back of cast .....	2 " "

# INTRODUCTION

This is one of a series of pamphlets known as the Merit Badge Library. The pamphlets cover all kinds of hobbies, activities, and vocations, and are prepared by experts and frequently revised and brought up-to-date.

These pamphlets do not attempt to give complete information on every requirement, so you will need to use your own initiative in digging out further information to meet some of the requirements. The pamphlet, however, does tell you how you can secure added information from books on the subject, or from your Counselors and other experts.

Your Merit Badge Counselor is appointed by your Local Council Committee on Scout Advancement. Talk with him before you begin to work on the requirements. He will get you started right. When you and your Counselor are satisfied that you are fully prepared, the Board of Review of your Local Council (or, in larger communities, the District Board of Review) then makes a final check-up—not an examination—to make sure that you have complied with all the requirements. After this, you will receive your Merit Badge at the Court of Honor ceremony. If there is no Committee on Scout Advancement in your community, an Examining Committee of at least three members supervises the Merit Badge requirements.

In meeting the requirements, do more than merely follow the requirements technically. Show that you have a real knowledge of the subject. As you know, this knowledge should be practical rather than just "book-learning," and a Scout is ready at any examination to answer questions on previous tests given him, and to show that he is putting the Scout Oath and Law into daily practice.

To increase the value of these pamphlets to you, there is vocational information in connection with many of the subjects. If you have any suggestions on the treatment of any of the Merit Badge subjects, write to the Editorial Service, Boy Scouts of America, 2 Park Avenue, New York, N. Y.





Eggs. Overcast sky at noon. 1/25 of a second. F:16 opening. Panoramic X film.



Nestlings. 1/50 of a second. F:3 opening. Courtesy of George A. Smith.

Protecting nesting birds so that the young ones may hatch and grow up, is part of the conservation work encouraged and accomplished by the Boy Scouts of America.

## FOREWORD

Scouting emphasizes protection of wild life, particularly its feeding, as a part of our program of conservation. Through the years, wild life protection projects in Troops have always had a wide appeal. The Hornaday Award for Services to Wild Life, presented through the courtesy of the New York Zoological Society, is sought by Scouts more widely today than ever.

It is timely to strengthen this emphasis now. There is no activity which offers more constructive opportunities for the enjoyment of wild life than Stalking. This pamphlet not only provides an opportunity for the Scout to meet the Merit Badge requirements in Stalking but offers many fascinating activities which take him into the open and increase his appreciation and intimacy with all phases of Nature and with life in the open spaces. It opens up shadowy paths and brings close the thrilling experiences of charting new trails. This new volume is strongly recommended to all Scouts. It is a further development in our promotion of good ideas for the protection and understanding of wild life.

*James E. West*

*Chief Scout Executive.*

## STALKING



*Find the Scout*

Years ago most boys had large collections of birds' eggs. These were stolen from birds' nests, so that countless thousands of song bird and game bird eggs were destroyed. The egg collectors stalked the mother birds right to their nests. Also there was a steady destruction of the smaller wild animals by B.B.s and 22's.

In 1910 Scouting came with its motto "Be Prepared" to conserve America for all generations. Boys of Scout age began to do things that had seldom been done by boys. They began to study birds from a new angle. They began to see in the wild animals something other than rifle targets. The B.B.'s, "22 guns," "sling shots" and "bean shooters" were moved to the rifle range or discarded by Boy Scouts. They became friends of birds, and birds became their charges.

For more than 30 years Boy Scouts and their leaders have been helping to build up rather than destroy.

Protecting wild life as outlined in the Conservation Merit Badge requirements is sound. The Bird Study Merit Badge requirements show how to feed and protect birds. There are more than thirty Merit Badge subjects that cover some angle of Conservation. This Merit Badge pamphlet on Stalking is an opportunity to learn about wild life by "shooting" with a camera, not with a gun.

On a practice maneuver a scout was sent ahead to find the enemy. He hurriedly crawled up in advance of his Regiment. From around a stone wall he saw some bushes move. As he looked a pinkness seemed to fade from the brownness of the autumn leaves. He studied this strange happening. He guessed that the pinkness was caused by the faces of the enemy scouts. Their khaki army overcoats had blended perfectly with the bushes. When they ducked down, they betrayed themselves.

Our Scout Uniform is good basic stalking clothing. That



is, if we hide the bright neckerchief. Protective coloring is essential to good stalking. The ski troops with their white clothing proved this all through the Russian campaign in the winter of '41-'42. Our own winter parachute troops have adopted the idea.

Once in the West a cowboy nearly rode over an old Indian who was sprawled out flat under a faded tattered blanket. Luckily, his horse discovered him in time and jumped sideways. The old man had lain so still and blended so perfectly that he was not even seen, until he moved.

Keeping perfectly still at times and for long periods is a basic principle of stalking. Plunk yourself down in a deserted meadow. Lie absolutely still for half an hour. It will be hard but it can be done. You may develop itches all over, but don't scratch. You may develop a tender muscle but don't move to ease it. Learn strict self-discipline. Some sharpshooters and military patrol scouts have saved their lives because they had learned this simple vital lesson.

As you lie quietly in the meadow you will begin to hear stirrings and whisperings in the grass. A field mouse, a short-tailed shrew, a bird or perhaps a rabbit will appear. If no larger animals show up, study the insects.

Start your tracking and stalking in the snow if you have any snow, or along the sandy beaches or muddy edges of marshland. Perhaps, a river bank when the river is low, or the sands of the desert may give you your first lessons.

This is how cattle trackers out West pick up a lost trail. Having marked where the last track appeared they dismount and cast around in gradually widening circles. Carefully they scan the hard rocky ground. At right angles to the former direction of the tracks they may find a few pebbles which have been disturbed. Searching a bit further they come upon some cropped bunch grass and gradually pick up the cattle tracks again in a draw a mile away. The cattle rustlers whom they are trailing have taken advantage of the hard rocky stretch to veer at right angles to their course. But the keenness of the trackers catches up with the thieves.

When tracks seem to disappear, get close to the earth. Don't blot out the possible trail by tramping it down.

It requires patience to look into the home lives of our animal friends. It requires a certain amount of deftness and skill to get near enough to study and photograph and sketch them. To get near an animal without being suspected is surely an achievement. To cross a valley where little protective covering exists is an accomplishment. To get over an open sky line unseen is good stalking.

Practice following footprints on the beach where the Coast Guard Patrol walks. Try a plowed field. Then go on to more difficult problems. In stalking study the habits of the animal or person you are trailing and use this knowledge intelligently.

Wild animals have keener senses of smell and hearing. Therefore, if you move with the wind, you are very often giving away your approach. Work up against the wind. Study your ground before you move forward. You may find you are almost on your animal before you know it. In the Catskill Mountains you can follow bear tracks up beyond Hutchins Hill. One day while working up wind through the tumbled masses of rock in the Notch, an old farmer almost stepped on a nice friendly black bear. They looked at each other for some moments before the bear shuffled off into the bushes and the old farmer rather breathlessly, back-tracked.

With protective covering, (Scout Uniform), ability to "freeze" and hold it; ability to observe carefully, accurately, and the desire to go out and discover nature, you'll make an expert stalker—you can't help it.

Learn to inch forward on your elbows and knees without allowing your head or buttocks to show. Learn to look out from unexpected levels.

Try this stunt. Go to a closed door, knock on the door and call. Before anyone can answer and open the door, drop to the floor and to one side and "freeze." The person who opens the door will look right over you for he expects someone about your height to be standing there.

The following article is from the November, 1941, issue of the magazine, *Scouting in New South Wales*. It is amusing to read, but it goes right to the point.

(See Requirement 4)





Find the Scout

## LET'S STALK

(By "Bada.")



Good Stalking

*"A number of Army men have told me how useful has been stalking they learned when they were Boy Scouts. Out on Army manoeuvres they have lived to manoeuvre another day because they have been one up on those of the enemy who have never belonged to the Scout Movement."*

"In the course of time, however, all the infantrymen make a special study of stalking, and the Germans have commented on the ability of the Australian troops, which causes them a great deal of annoyance. And so, if the Nazis don't like it, that makes it good enough for us.

"First of all, what, precisely, is stalking? Give up? It is the act of making one's way stealthily towards an unsuspecting person or animal, using whatever cover is available with a view to appearing suddenly behind him—to prod him in the back with your staff and to hiss through clenched teeth: "Keep your mouth shut, sucker, if yer don't wanner to be bumped off!" No doubt he will swoon, and you are then free to stalk off triumphant towards another innocent victim.

"It is really all quite thrilling, but it takes a good deal of practice. Before becoming the stalker superb you must get a few essential points embedded firmly into your skull. They can be summed up under the headings, blending of colours, and stillness. Regarding the first, note the following: Arrange to stalk with a background that blends with the colour of your clothing.

"As suitable backgrounds are rather awkward to carry around with one, it would be easier if one were to wear suitable clothing. The Scout Uniform is rather useful. It some-

times helps if you stick leaves or grass into yourself, as this tends to make your outline less apparent. If you had an outline like mine you would never be without some sort of camouflage. Flesh colours are obvious, and must be counteracted.

"Avoid use of soap and water for ten days before stalking, or cover up in some way—especially your face. If you are wearing a wristlet watch, medals, or kerosene tins, be careful not to let the sun shine on them.

"Darting from bush to bush is not as effective as the use of folds of ground, depressions and shallow ditches. Move in the shadows where possible, and keep off the skyline.

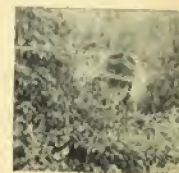
"When you have committed these few hints to memory you will be ready to start your stalking practice. Well, now, just imagine you are trying to make your way towards me without being spotted. It is a bit tough to set you such a task for your first attempt, but don't let the prospect of certain failure daunt you.

"One more word before you start. You must avoid all unnecessary movement, and whatever position you adopt—upright, crouching, crawling, lying—let your movements be slow and deliberate. Sudden motions attract attention. Right, get going. My! My! Where can you be? I hear much crackling of dry leaves, and much swishing of undergrowth. A herd of elephants approaches. No, it's you. That won't do at all! If you walk do not tip-toe or slide your feet; lift them off the ground and replace them steadily, using the whole flat of your foot to balance on. Also, lift the undergrowth aside bit by bit, and wriggle through underneath.

"Go back and try again... Ah-ha! Some strange denizen of the bush draws near—but what? Slowly it is making its way towards me. I am speechless with horrific wonder. What, you again!

"You had me tricked for a moment, but, strictly speaking, you gain no advantage by approaching backward with your seat humped into the air. Always stalk frontwards, and let your head be your highest part, and even carry that low.

"A slim Scout should crawl on his tummy without dis-



Find the Scout





Buck mule deer with its horns "in the velvet." This remarkable photograph taken by Charles H. Coles, Chief Photographer, American Museum of Natural History.

playing any tell-tale curves. Also, when crawling or lying do not lift your feet from the ground, as the movement may be seen. I have only enough room in this account to allow you one more try. Buzz off again, and I will shout some more directions to you while you are stalking...Hm! I've lost sight of you; but listen to me, wherever you are. Look around obstacles, not over them.

"If you think you have been spotted, remain perfectly still and don't try to disappear suddenly. Wait a bit, and then move slowly away to flank or to rear. Do not stalk directly towards the sun when it is low, because your objective will be in shadow and you in light. Where the dickens are you? I hope you can hear me. Go around a long... (We regret the abrupt ending to this article, but "Bada" fainted when a stalker jumped up immediately behind him and poked him in the ribs.—Ed.)"

**Wide Games**—Chat 31, Vol. II *Handbook for Scoutmasters*, gives some suggestions for games which will improve your stalking ability. Your Patrol will have plenty of fun and thrills while playing them.

Here follows a selection of stalking incidents from Leonard Rossell's "Tracks and Trails." They are about the seashore, the woods, the fields, the mountains. In reading them suggestions may occur of suitable places for you to stalk. Included with them are hints on *How To Photograph Animals and Birds*, by Clinton G. Abbott and *Hints on Making Track Casts*, by E. Laurence Palmer.

## "SHOOTING" AN EGRET

A Scout came running into Camp early one morning in search of his camera. He had seen some snowy egrets feeding among the weeds at the edge of the river.

"You will have to do some careful stalking to get near those birds," warned the Patrol Leader.

A few scattered trees grew along the bank, and these enabled him to remain hidden while approaching the place where he had first caught sight of the birds. A glimpse of white told him they were still there.

"If I can manage to reach that log without scaring them," he thought, "what a picture I'll get!"

He crawled half-way on hands and knees, but covered the rest of the distance by dragging his body over the ground, after the manner of a seal.

Reaching the log without being seen, he peeped round the end and discovered that he was within a short distance of the nearest egret.

He set his camera for that distance and snapped. Fortunately the click did not disturb the bird.

Realizing, however, that this might not be a very good picture, he waited a while. Presently the bird, stirring among the rushes, came out into the full sunshine. Her snowy plumage was a beautiful sight against the green background of reeds. The boy held his breath in awe and admiration. Then he carefully focussed his camera and took another picture.

This was the first time he had stalked a bird. Feeling highly elated at his success, he returned to Camp, whistling all the way.



Egret







*Courtesy of George A. Smith, Quarryville, Pa.*

Mother Bird and nestlings. Sky overcast, drizzling rain. 1/50 of a second. F:5.6 opening. Plus X film. Taken through a slit in a canvas tent erected near the nest.

## HOW TO PHOTOGRAPH ANIMALS AND BIRDS

By Clinton G. Abbott

*Director, Natural History Museum, Balboa Park,  
San Diego, California*

The sport of photographing wild birds and animals has often been compared to hunting with a gun. For the camera hunter there's this great advantage—there is no such thing as a closed season and every living creature is his legitimate game.

There are four kinds of places to which birds, by instinct or habit, return again and again, and here they can be most easily photographed. They are: (1) the nest; (2) where their young are; (3) where food or water is; and (4) some favorite perch or area. On any of these a camera can be focussed and, with patience and the proper methods of concealment, you can secure beautiful photographs of the most timid birds.

## TAKING THE BABY BIRD'S PICTURE

In general, satisfactory pictures of young birds cannot be made while they are still in the nest. By far the most pleasing pictures of young birds are made when they are old enough to leave the nest, although still too young to fly well. They can be perched on a branch which has previously been arranged in exact focus of the camera, and with good luck, you can sometimes get the parents bringing food to them. The writer once put some downy sandpiper chicks in his cap and placed it on the ground, after which he photographed their mother standing on the cap where she had come in answer to the peeping of the little ones. In handling birds, it is important that they be treated kindly. Prolonged direct sunlight will not only spoil eggs, but will kill practically all young birds. Youngsters should always be given shade, except when photographs are actually made.

Food and water as means of attracting birds have produced many beautiful portraits. A bird bath or drinking pool is a source of attraction second only to food.

Many birds use regular lookouts or resting places. A hawk will stand on a pole or a fly-catcher on a given twig. Camera shots of birds in such situations can sometimes be hastened by removing all perches but one, upon which the camera is focussed.

Some of the stories of how birds have been coaxed in front of the camera make interesting reading. Once an enterprising young photographer placed a wooden fish in a pond, anchored so as to give it the appearance of basking near the surface. A fish hawk that was flying over cast a downward glance and, after circling around, hovered over the spot, while the young man watched, breathless, from his blind. Then the fish hawk plunged, and the instantaneous snap of the camera shutter recorded a superb photograph of the bird with wings spread, talons extended, and the drops of splashing water still in the air.

Other amazing pictures have been secured through the use of a stuffed owl or stuffed crow. Practically all daylight







Dummy camera

birds seem to hate the owl, and if they find one abroad they will gather round to torment it. So try erecting a stuffed owl, with a "scolding perch" close by, arranged in focus of the camera.

Use a dummy camera to accustom birds to the presence of the real camera. Almost any kind of imitation will do—an old box, with something screwed in front to look like a lens, a cloth tacked over it, and boughs for a tripod. It should be placed far away at first and then gradually moved closer and closer, the operator, meantime, losing no time while the birds are learning their lesson. When the dummy is standing near enough for a satisfactory picture, the real camera can be substituted. A loud-ticking clock, tied to the dummy camera, has sometimes been used to accustom the birds to the clicking of the shutter—the clock being later transferred to the real camera.

If you photograph from a blind, that too, should, if possible, be moved up gradually and left long enough for the birds to become thoroughly accustomed to it. Another trick is for the photographer to arrange, after he is hidden in the blind, to have a companion leave the blind in full sight of the bird. Few birds can count, and in some instances all that is needed to quiet their suspicions is the sight of some one walking off and climbing over a fence.

Much of this advice about bird photography applies to photographing animals. With the exception of a few species that live underground or in trees, animal lairs are not nearly so fixed and well known as the nests of birds; nor do they take their young out into the world until they are well able to take care of themselves. But the main difference is that a large proportion of mammals are night creatures and are seldom seen in the sunlight. To secure pictures of such animals, under conditions that are more or less natural, photograph them at night by flashlight.

Discharge of the flashlight and tripping of the shutter can be done as the animal touches a wire across its runway, pulls on a piece of bait, or steps on a specially adjusted electrical connection, etc. In fact, a mechanically minded Scout can

work out a "rig" that may get just as good results as some of the expensive devices now sold for photographic work of this kind.

If you prefer to stick to daytime photography, devices can be worked out by which a weight is released when a bird settles on a perch or an animal touches a trip-string. The downward force of the weight pulls the thread attached to the shutter-prop. Even 5-cent mouse-traps, of the usual spring release variety, have been used with good effect to provide the necessary jerk on the release thread, when there are no human hands around to do the job. Don't forget, though, that when camera equipment is left exposed either by night or day, some form of protection from rain should be provided.

Learn to stalk with photography, and you have a hobby that will give you more fun every year you live.

## CAMOUFLAGE

Hiding yourself is of the utmost importance. Few wild birds can accommodate themselves to a strange object like a camera, with its staring glass eye. Much less can they overcome their fear of the photographer if he is in full view. Camouflage and "blinds" of some sort must therefore be used. Successful workers have used artificial tree trunks, artificial rocks, and artificial rubbish heaps; they have even stalked about inside of artificial cows and sheep, with the camera lens peeping through the chest of the animal!

Much simpler types of blinds are just as good. Birds are alarmed primarily by unusual movement, but will soon get used to even a large or strange-looking object, so long as it remains motionless. A blind can be made by sewing the edges of long pieces of green cloth together, drawing in the top with a cord and draping it over an open umbrella. Sometimes the legs of the camera tripod will make the framework for a little tent. Another handy blind can be made by simply spreading a canvas over a depression in the ground.





## "SHOOTING"

Half the fun of bird photography is overcoming obstacles and sharpening one's wits to meet a given set of circumstances. Many birds' nests are in leafy places. A spotty effect is obtained if photographs are made in direct sunlight. A diffuse light is very much better than direct sunlight.

If the bird is sitting on her nest, she is apt to turn her head when she hears the first "click" of the shutter. To overcome this, it is wise for the photographer to make a clucking sound with his mouth, as the exposure is about to be made, and when the bird's attention is fixed, open the shutter.

## MAKING PLASTER TRACKS

One morning the Scoutmaster told the boys to be sure to take pencil and paper with them on the hike that day. "Those of you who have cameras, bring them along too," he added. Then, turning to the Patrol Leader he said, "In the corner of my tent there's a bag of plaster of paris, which we will need. Will you be responsible for it?"

"Certainly, sir."

"We shall also require a pail and a small enamel bowl," he added.

At 8:30 sharp they were on their way. They soon found some opossum's tracks recorded in the mud. The peculiar hand-like mark of the hind feet, the characteristic tail drag, and the five well-separated toe marks in the print of the forefeet, making an impression as clear as the claws of a bird, were unmistakably those of an opossum. The gait showed that the animal had proceeded in a slow leisurely fashion, which, in fact, was the only pace the dull-witted fellow knew.

"Suppose we make a plaster cast of the track," suggested the Scoutmaster. "Someone get a stick, and we'll start by putting a little water into the bowl. Now for the plaster. Pour it gradually into the water, while you stir it thoroughly.



Opossum tracks

Put these thin strips of cardboard round the two best tracks, and fasten the ends with these paper clips."

"How thick should the plaster be?" asked one of the boys.

"About the consistency of heavy cream or thick pancake batter. If it is too thick it will harden before you have time to pour; and if too thin, it is liable to crack later. That's about right. Tap the side of the bowl to break up any bubbles. Now pour it quickly but gently on to the track, preferably from one side till the plaster is about an inch and a half deep. The cast will then be strong. Now we'll leave it to dry thoroughly. You had better empty the bowl and clean it right away, before the remaining plaster has a chance to harden."

"How long will the cast take to dry?"

"It should be ready in ten or fifteen minutes," said the Scoutmaster. "On a cold or damp day it would take a little longer. I know it seems a long time to wait, but you wouldn't want to spoil it for the sake of a few minutes, would you? Now, before it is too hard, engrave on it the word 'Opossum,' the date, and 'C. V.' for Camp Victory.

The fifteen minutes were soon up, so they dug the cast out carefully and washed it, cleaning the crevices with an old tooth brush. There it was, in high relief, an exact impression of the 'possum's right fore and right hind feet, touching each other. Pressing the cast into the mud the Scout saw that it made a clear imprint.

If you insert a ring in the top while the plaster is still wet, you'll have an attractive plaque for your wall. This cast is called a negative. You can make positives from it simply by rubbing it thoroughly with vaseline and covering all the crevices. Then place a paper collar around it, higher than the cast; and pour some plaster into the collar and on to the track. When this is hardened, you can separate the two.

"Now let's take a picture of the rest of the trail," said the Scoutmaster. Several got out their cameras and focussed them on the trail.

"No, I wouldn't take it from that position. Come over here and face the sun. Now you can see the shadow on the



Cast of  
Pos track



the track. I'll shade your lens while you snap it. Attaboy!

"Now that we have a cast and photograph, all we need to complete the collection is a drawing. Make a life-size sketch of the right fore and right hind; and then copy the trail a little way to show the gait. Make it a plan drawing to scale.

Making casts of mud tracks as described above is one thing. When tracks are in sand or snow the technique is a little different.

## HINTS ON MAKING TRACK CASTS

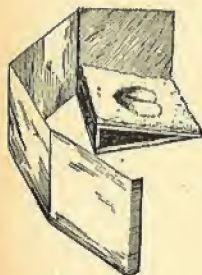
By E. Laurence Palmer

No matter how loose and fluffy the snow may be, a perfect cast may be made on a cold day. To do this spray the tracks with water from an atomizer until a firm crust has been formed where the spray freezes. When this is done you may safely follow the same directions suggested on page 12 for making casts of tracks in mud. This is particularly true if you mix some snow with the water and plaster, so that the mixture is at a temperature practically the same as the ground.

Making casts of tracks in snow that is melting is a more difficult task. Here no atomizer should be used, of course. Instead, merely mix as much snow into the plaster and water as you dare, and pour the plaster, while very soft, from one side of the track, allowing it to flow over the track instead of dropping on it.

The best system for making casts of tracks in dirt is based on the fact that salt causes plaster to harden very quickly. Take advantage of this fact, by sprinkling the dust track, from a considerable height, with fine salt from a salt shaker. Then mix the plaster and pour it beside the salt-covered dust track, allowing it to flow over the track just as it is ready to harden. A little vinegar mixed with the plaster and water will delay the hardening as you desire.

14

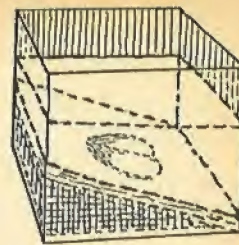


Set-up for  
making  
bookends

## BOOK ENDS BEARING TRACKS

Track book ends make attractive and useful gifts.

The book ends may have a base 4 by 7 inches and a stand 6 inches high. The face which stands adjacent to the books is, of course, at right angles to the base, and plain. The face away from the books bears the track impressions or track elevations, as the case may be.



Casting form  
ready for pouring  
plaster or  
cement

To make the book ends, use a piece of inch board, 6 inches by 7 inches. Around this wrap a strip of tin about 6 inches wide and 30 inches long, so that the whole resembles a box with the board as the bottom of it. A single shingle nail, tacked through the overlapping ends of the tin into the board, will hold the tin in position.

Inside this box, and along one side, lay a cleat about  $\frac{1}{2}$  inch square. Then lay some cigar-box covers on top of this cleat so that they make a slope to the opposite side of the box. On top of this slope put a layer of modeling clay or soft mud. This, of course, will lie at an angle to the bottom.

In this clay make an impression from the plaster cast of a track. Then roughen the surface of the clay uniformly, by tapping it gently with a roughly broken stone. After this is done, mix the plaster of paris and pour it into the box. For book ends you may mix concrete with the plaster, if you desire. If you wish to make the book ends extra heavy, you may imbed in the soft plaster a quantity of scrap iron on the side which will make the bottom of the book end. While the plaster is still soft, you may scratch in it, if you desire, your initials or a legend concerning the track.

When the plaster hardens, remove the tin and take out the rough end. With a wood file or with your knife, smooth the corners as you see fit. When this is done, the book end is ready for use, unless you want to paint it.

Reprinted by permission "Cornell Rural School Leaflet"

(See Requirement 2 and 3)

15





## ON A SOUTHERN RIVER

It was Easter vacation. The Scout camp was ideally situated on a projection of the mainland. Live-oaks of unusual size and beauty lined the banks of the river, their overhanging boughs, draped with Spanish moss, almost touching the water. Magnificent red cedars gave dignity to the scene, while magnolias lent an added charm.

The shore line was broken up by numerous creeks, which were filled with water at high tide. Certain tracts of land were under cultivation, but the interior remained a virgin forest.

Early one morning they set out with their Scoutmaster for the woods. On the way they came across a track in the dusty road. They followed it excitedly. It led to some bushes and then disappeared.

"Look at this track!" cried one of them. "Let's go round the bush to see where he came out."

"This isn't where he went in," said the Scoutmaster. "This is where he came out. You have been tracking him backwards. A rabbit places his hind feet in front of his fore."

"If you follow the track the right way, you will find that the distance between the sets of fours gradually diminishes, the forefeet continually gaining on the hind until, after a while, the trail stops, with the forefeet in front."

Something must have alarmed the rabbit at this spot, for he had turned aside into the tall grass. The boys wondered what it could have been. The answer was close at hand, however, for some rounder tracks, not far away, showed that a dog had been fast on Bunny's trail.



Pointing to a runway about five inches wide, where the rabbit's tracks had ended, the Scoutmaster said: "If you could follow that tiny path, you would soon find it was crossed by another, and yet another, and would realize that you were in a perfect maze of little paths, most of them leading nowhere. Molly Cottontail has many enemies and this is one of her methods of escaping them. Imagine how disconcerting these by-paths must be to a hungry fox who has picked up Bunny's scent as she is feeding in a field of clover! Molly makes for the runway and reaches it just ahead of her pursuer. He scents the trail to one of these paths, only to find it a blind alley. Retracing his steps, he again picks up the scent, but soon loses it once more in a similar way. After vainly attempting to unravel the tangle, he at last gets discouraged and gives up.

"A Cottontail chooses an open spot, often near a stone or fence, where she makes her 'form.' It is usually on a slight elevation, giving her a good view, and permitting her to catch the scent of any hostile creature.

"As a rule Molly Cottontail is obliged to take life quite seriously, but sometimes on a moonlight night she is to be seen skipping merrily about with her friends, her white tail bobbing up and down like the spotlight on a dancer. Knowing her giddy antics, Reynard the Fox, will lie in ambush and, when the fun is at its height and the circle widens, he will make a spring at the nearest reveller.

"Nor are the rabbit's enemies hiding only in the bush. Danger hovers even overhead. Silent as a snowflake, with only a shadow for warning, a Great Horned Owl will swoop down on its helpless prey, grasp it greedily in its talons, and fly away to devour it in some secluded spot."

After walking through the woods for a short time the party came to a low-lying spot, bare of vegetation. It was under water most of the year, but the past two months of continuous heat had completely dried it up. Now it formed an ideal tracking ground, being composed of sandy loam, and as it was situated between the woods and fields many animals and birds frequently passed over it.

Rabbit tracks

Badger tracks





Trail of barefoot boy and Raccoon



Raccoon tracks

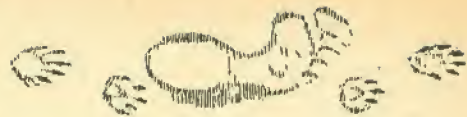
## RACCOON

The first track that caught their eye they recognized as being that of a dog. A few yards away was another trail, the footprints seemed to be about the size of a fox's. "Well, it can't be a 'possum, for he wouldn't gallop like that," said one of them. "Oh, I know!" said another, "that's a raccoon track.

"Notice the clear hand-like impressions. The raccoon is a plantigrade or sole-walker; that is, he walks on the flat of the foot. Bears, porcupines, rabbits and squirrels do the same. He is often called the little cousin of the bear. The only resemblance, however, seems to be in the shape of his hind feet, which, as you see, rest flat on the ground. Perhaps, also, the fact that he is very dexterous with his forefeet, using them as hands, is responsible for the comparison. Indeed, altogether, the little creature displays an extraordinary intelligence.

"The raccoon catches frogs, turtles, clams; and, to vary his diet, wanders in the woods in search of nuts and berries. He has a very dainty habit of thoroughly cleansing every bit of food in a running brook before it is consumed. He is seldom seen abroad in the daytime, but, as you all know, the midnight marauder frequently runs into danger while robbing the cornfields.

"While the raccoon makes his home in a tree, the greater part of his life is spent hunting for food by the borders of streams and lakes. Along these banks you can see how busy he is by the many trails leading from the water's edge."



Duck tracks

## ON THE SANDS

Stealthily creeping up the ridge from the beach one fine morning shortly after dawn, the Scouts and their Scoutmaster surprised a great blue heron fishing, his long legs knee-deep in water. He remained motionless, for what seemed to them an interminable length of time. Then, without warning, he made a lightning stab with his beak, and up came a fish. One gulp and it was gone. The size of the heron's track astonished the boys, especially the unusual length of the hind toe. Evidently the wide span of his long toes prevented him from sinking in the mud.

Presently a blue and white kingfisher was seen perched on a log, alert to catch the glint of a shining fin below the surface of the water. Suddenly, flying up from the log, he hovered on quickly moving wings, ready to plunge down at any moment.

Among the many tracks on the sand bordering the inland ponds made by the waves at high tide, none so amused the boys as the trail of the ducks. Nor could they understand how ducks managed to avoid tripping while passing one foot over the other. These same ducks, which waddled so clumsily ashore, use their webbed feet when in the water both as propellers and rudders.

One track, common on the sand, was a mystery to them. It was not made by a wader or a swimmer. All four toes were long, the three in front being close together. But the problem was solved one day when they surprised a crow pecking at a dead crab on the shore.

Track of Seagull alighting in wind, and skidding slightly



Blue Heron





This remarkable photo of Mountain Caribou was taken at 7,000 feet, in British Columbia. John F. Stanwell-Fletcher writes: "The caribou saw me quite clearly but stopped every time I whistled. I pretended to be a marmot sitting on a rock."

## DEER

As they walked back to camp a deer came bounding gracefully through a forest glade.

"Keep still," whispered the Scoutmaster.

The doe, scenting them, swerved to the right and leapt over a bramble bush, making a great show of her snowy-white tail. They followed cautiously to see where she had gone. There, in the distance, the doe stood, a beautiful sight, with head held high and small ears alert, her sensitive nostrils searching every passing breeze. It was only a momentary picture, however, for presently she bounded over the long grass and was soon lost to view.

The party approached the spot where she had first turned aside, and there, in the soft ground, discovered a few tracks. The boys looked at the graceful shape of the print, with its continual curve pointing forward to the center.

When you come across the track of a sheep or a wild hog, you will notice a distinct difference, for the tracks of the latter two are always more spread and are less pointed at the forepart of the hoof.

Passing by a cypress swamp the lads noticed dozens of snowy egrets nesting there. Right overhead a flock of wood ibises soared in the blue, their black and white plumage dazzling in the sun.

Coming out of the woods, but keeping among the thickets by the bank of the river, they soon became aware of the presence of innumerable birds twittering and fluttering among the many branches. The gay cardinal was there in his suit of red; brown thrashers, blackbirds, redwings—all contributed to give a continual sense of ever-moving beauty.

Presently they came to a clearing and the sudden view of tent tops told them that camp was close at hand. They quickly covered the remaining ground, and on arriving the boys all talked at once, in their eagerness to tell the others of the thrilling experiences of the trip.

## THE MOOSE

The Scouts often went out in the canoe together, and one day, as they were paddling through a lonely lagoon, one of the boys said in a low voice, "What is that creature over there?"

At that moment the animal caught their scent stumbled up out of the marsh, and silently disappeared into the thick underbrush that fringed the edge of the lake.

Thrilled at the sight, they quietly made a landing in order to examine the animal's track. They found it was more broadly spread than that of a deer, being also much larger and more pointed. The dew claws had left a distinct mark in the soft mud. Following his trail into the woods they were impressed with the unusual length of the creature's stride. They stopped at intervals to listen, but could hear no sound of breaking twigs or shuffling leaves as the moose made his retreat.

At that moment a welcoming voice rang through the woods, and an old man appeared. He was a woodsman, an old friend of the Scoutmaster's.

"Well, I certainly am glad to see you," he cried warmly shaking hands all around.





## SQUIRRELS

After lunch they decided to wander through the woods. The trees had begun to turn; the leaves of the sumach were crimson, and the maples a riot of color.

Just then a grey squirrel that had been foraging among the fallen leaves uncovered a nut and hurried away with his prize. A moment later he was back again looking for more.

"I wonder where he buried his last find."

"That's his secret," replied the woodsman.

"This is the little fellow's busiest time, for now the nuts are ripe and ready for harvesting. He stores them away in crevices in rocks, holes in trees, and the little safety deposit boxes that he digs in the ground. Then, when winter comes, he scratches away the snow with unerring precision from the spot where his hoard lies hidden. Here a choice chestnut and there a few seeds. Probably many a young oak sprouting up in the spring comes from some acorn that an industrious little squirrel buried, but failed to dig up again."

## BEAR

Presently they came to a patch of brambles. The woodsman picked a tuft of fur from a thorny stem, "Bruin has been prying around here."

They traced the bear's progress as he had passed from bush to bush. Then some trampled-down grass showed that he had ambled across a clearing. They could even make out the shape of his big flat feet. At some rocks they lost the trail, but the old woodsman, after looking around, pointed to the trodden grass ahead. The trail was lighter than its surroundings.

"Yes," said the hunter, "that shows he was going away from us. Had he been coming towards us the trail would have appeared darker than its surroundings."

There was a good wind, blowing in their direction.



A Squirrel's tracks "pair," whereas the Rabbit's rarely do—



Black Bear tracks

Further on a few overturned logs, with the damp earth still clinging to them, showed that Bruin could not be so very far away.

Seeking whatever cover presented itself, they advanced cautiously. Then, dropping on all fours, they crept forward and reached a large rock. From this hiding place they saw the bear. As usual he had been looking for something to eat and had found a goodly supply of grubs and beetles in an old decayed stump. His seemingly clumsy paws were picking out the tiny insects with amazing dexterity. Suddenly a thought must have struck him, for he left the stump and made his way down to a stream. Squatting on his hunches, he peered into the water. With one paw uplifted he remained motionless for a moment, then with a lightning swoop the paw descended and a fine trout was flopping on the bank. In a second Bruin was upon it, and swallowed the morsel with evident relish.

Looking up suddenly the bear saw them standing on the hill above.

"Keep very still," whispered the old man, "he has poor eyesight, and perhaps will not be able to tell us from the tree-stumps that are around."

But Bruin was not deceived. He quickly vanished into the woods, making as little sound as a rabbit.

"Well, that's the first bear I've ever seen," said one of the Scouts, "let's go down and examine his tracks."

So away they went, and found Bruin's trail in the damp soil leading to the water.

"He didn't look very dangerous," the boys remarked.

"No," said the old man. "All he asks is to be left alone. In fact, his sense of smell is so acute and his hearing so keen that he usually knows when you are around, and is the first to go away. But if you ever meet him accidentally he is as much surprised as you and just as anxious to avoid any unpleasantness. There are times, however, when his mood is not so amiable, and then Bruin is best left alone; and should you ever meet a mother bear accompanied by cubs I'd advise you to retreat as quietly as possible."



Lynx tracks



Fore



Hind

Grizzly tracks



## ELK AND WOLVES

"Once in the Rocky Mountains," the old man went on, "I suddenly came on an elk. He was a beautiful sight, silhouetted against the sky, tossing his proud head, crowned with widespread antlers. Years ago he ranged over the whole North American continent, except the extreme North. But when the white man came the herds retreated to the mountains. Here they managed to make a stand among the foothills, traveling up the mountain sides in summer. But in the season of deep snows they were forced to lower levels in search of food. Thus they were brought in contact with the wolves, which were a constant menace to their young."

"Is the elk a fighter?"

"As a rule he is a peaceful creature," replied the woodsman, "but when his anger is aroused there is not a more dangerous animal to be found. The stags fight desperately for the leadership of the herd, and occasionally one of the combatants is killed."

"Once in the snow I read the story of how an antlered monarch won a bloody battle against half a dozen hungry wolves. The ravenous creatures had picked up the scent of the quarry, who, hampered by the deep snow, had been forced to make a stand for his life. With his sharp-pointed, cup-shaped hoofs the elk can strike with all the force of a sledge hammer, and one blow on a vital spot would kill a wolf instantly. Such an attack, followed by a furious onslaught of his mighty antlers, might well bring terror to the hearts of the most courageous foes. That the wolves had fled after such a charge was evidenced by their retreating footprints in the snow, while blood marks on the trail told of the wounds they had received."

"A trifle to one side of the scene of the conflict lay the mangled remains of one of their number. An ugly gash in the head showed where the elk had felled him with a lightning stroke of his hoof, while the body, gored almost beyond recognition, told how the angry creature had wreaked revenge upon his fallen foe."

24



## THE BIGHORN

"In the Rocky Mountains," said the woodsman, "we were trying to get a photograph of that peerless mountaineer, the Bighorn. It seemed an almost impossible task, but we felt that the sport would be well worth any risk."

"When we first saw the track we thought it had been made by a deer, but on closer examination missed the slim, pointed toemarks of that graceful creature. Then, recognizing the square bluntness of this mark, we realized that it was the track of a mountain sheep."

"The trail appeared on the green slopes, so we followed higher and higher, until at last we reached the snow-clad peaks and precipitous glaciers—the real home of this dweller of the hills. An occasional glimpse in the distance, as he appeared on the edge of some projecting cliff, was the only reward so far of our untiring efforts."

"Then some fresh upturned soil suggested that he had found some roots among the rocks. Soon a faint hoof-mark and an overturned stone gave us another clew. We followed this circuitous path, hoping that around the curve we might surprise the elusive fellow. We had to step cautiously, for one false move would have landed us in the abyss below. Then we knew that this was our last chance of snapping the daring climber, for to attempt to pursue him into higher altitudes would have been sheer madness. His agility and sure-footedness would carry him up many a steep incline, where we might never hope to follow."

"'Look!' said my friend presently in a low voice, for he had seen the Bighorn foraging in the snow. Crawling, we advanced stealthily, foot by foot, till the sudden bend brought him in full view. At the click of the camera up went his head. One startled look and he was gone."

"It was a wonderful experience. And we were so encouraged by this success that a few days later we tried to take a picture of the Rocky Mountain goat."

"You can't imagine how high we had to climb to see that ghost-like creature, motionless on the ledge of an almost



Mountain Sheep track



Mountain Lion Tracks

25



Elk tracks



Wolf tracks





On the cliff, clinging by one hand to a small tree, John M. Phillips made these thrilling pictures. The goat attacked, but was chased away by pushing the stereopticon camera into its face. The late Dr. William T. Hornaday was a few feet away.

perpendicular cliff, with snow-clad mountains towering above. Like a spectre he seemed to haunt the solitary wastes. White from head to foot, he was scarcely discernible in the early morning mist. A nearer view dispelled the illusion, and the long solemn face of the Rocky Mountain goat, ponderously shaking his shaggy beard, suggested the wisdom of the ages, as though some old philosopher, weary of the world's frivolities, had retired to the silence of the hills. Whatever the thoughts of this hunch-backed greybeard may have been, he was daring and sure-footed to a degree, while a curious deliberation characterized his movements. In fact, he almost posed for his picture!

## OTTER

"Why," there's an otter's track," said the old man interrupting his story about the mountain goat. "You are lucky to find it. I see he had just emerged from the water; but if he proceeded across country to reach another stream you would probably find his trail in sets of fours."

26



"Are he and the beaver good friends?" asked a Scout.

"No the old man replied. "On the contrary, there appears to be a strange feud between them. Perhaps it is due to the fact that the beaver's engineering proclivities interfere with fishing, while the sportive splashing of a giddy otter, trespassing near a beaver dam in winter, may seriously imperil the frost-proof condition of the latter's submarine storehouse. If this were destroyed, the resulting blockade of ice would mean starvation for the beaver and his family. Thus the feud continues, and I once saw a beaver and an otter struggling in a death-like grip, with no sign of either yielding.

"But the otter is merry and carefree withal, although an incurable wanderer. As he is such an expert fisherman and loves to take a plunge, earning a living is a mere pastime to him. In fact, the older the otter grows, the fatter and more frolicsome he becomes.

"One moonlight night I watched him sliding down a clay bank, worn smooth by much usage. He tobogganed down, entered the water with a splash, then reappeared to take another plunge. After he had played long enough the sleek creature swam away without even making a ripple.

## WHITE-FOOTED MICE

"This morning I found tracks of white-footed mice just outside my shack. They hoard up seeds, nuts and grain to live on during the winter, and come to see what I have to offer. I think the graceful little creatures are very pretty, with their grey-fawn coats and snowy white forefeet. They are exceedingly playful, and sometimes before daybreak you can catch a glimpse of their frolicsome capers. The lively fellows are good climbers, too. I once knew one to make his winter home in a nest that a bird had abandoned."

On the way home the snow had almost melted and the recent autumn rains had softened the fallen leaves. This made the going silent, and now and then through the branches a fleet-footed deer was seen. Once a stag stood alone in a clearing, and looked at them for a moment.

27



Skunk tracks



Otter tracks





Photo by J. W. McManigal

Problem in Stalking. No. 1. Here is a Kansas wheat field. Two wagons are loading wheat. How would you cross this field without being seen?

## PORCUPINE, WEASEL CHIPMUNK AND MINK

In a grove of hemlocks, the bark was stripped off in patches from some of the trees. A porcupine had been gnawing at it.

A chipmunk darted past, with a mink close at his heels. The chipmunk hurried into the hollow of a tree, and the mink disappeared after him. But presently the mink came out, without his prey.

"The mink is mean enough to kill him just for the fun of it, and then leave him there," the old woodsman remarked. "He is a cousin to that arch-villain, the weasel, who scatters terror wherever he goes.

"The weasel's ability to scale trees, leaping from branch to branch with the agility of a squirrel and the way he ferrets in the ground, make him a deadly foe to every bird and beast within his range. He has a perfect craze for killing birds and sucking their eggs. Molly Cottontail he finds an easy prey. In fact, his every step is marked with blood."

"Doesn't any animal ever get him?" asked one of the boys.

"The fox can catch him. Owls swoop down on him, too; but in winter, when he wears his white fur coat, they often get fooled. They make a grab at the black tip of his tail, but fail to catch the speedy creature."



Photo by Welch, Courtesy of the U. S. Soil Conservation Service.

Problem in Stalking. No. 2. Contour farming, South Carolina. How would you get from the small building in the lower right to the second building from the upper lefthand corner?

## ABOUT STALKING

"Did you know that there were wild turkeys in the woods?" a Scout announced one day.

"None of us have ever seen any yet," said the Scoutmaster, who had been at the Camp several seasons.

"Well, two of us found what looked like the track of a turkey. It was near the woods, and I don't know of any other bird that would make so large a track. We also discovered where they had been scratching on the ground and could tell the trees on which they had perched, because of the droppings. I sketched the track."

"Let's see it," said the Scoutmaster. "That's a turkey's track all right," he continued. "A heron's would be much slimmer, of course, and he leaves a long hind toe mark. Where did you make this other sketch?"

"Oh, we found that yesterday in the meadow."

"That was evidently made by a quail," he commented. "They probably go there to take a sand bath. Have you any more drawings?"

The Scout produced drawings of the tracks of quail, heron, crow, seagull, plover, coot, duck and sandpiper. "Those are very good, aren't they, boys?" and the Scout-



master went on to point out the difference between the tracks of the various birds.

"The land birds, such as quail, have rather small feet. They are compact and suitable for walking on dry land. The toes of the perching birds are slight, the three front ones being close together. This, in addition to their hind toe, enables them to grip the branches of trees.

"Besides the perching and land birds there is a group that live on both land and in trees, such as pigeons and doves. Their feet are broader than those of the perching birds, but are narrower than the feet of the land birds, and they also have a hind toe that shows in the track.

"In this sketch of a duck's track you will notice the mark of the webbed toes. It is typical of the true water bird. There is another group that live on land and water, such as the coot and the grebe. They are paddle-footed, possessing wide flat toes. Most of these are our neighbors. Perhaps before camp is over we shall know them better."

One of the boys insisted on coming back to the turkey again. So the Scoutmaster promised he'd take them stalking turkey on the following day.

Next day, the boys appeared at the Scoutmaster's tent. One Scout had his camera slung over his shoulder.

"You certainly are optimistic," said the Scoutmaster, "but we can hardly expect to get so close to a turkey as all that. There is not a bird in the woods so hard to stalk as he."

The three made straight for the edge of the pine woods, where the boys had seen the tracks several days before. Looking around they found fresh signs, proving that the turkey had been there quite recently.

"They are fond of the margins of cultivated fields, for there they can find plenty to eat. Suppose we go over to that ledge and watch."

The place provided a good view, and at the same time was partly screened by bushes. The stalkers had not long to wait, for presently the sun's rays shone on the beautiful bronze plumage of a magnificent wild turkey.

They promptly dropped on hands and knees and crawled noiselessly along the ground. The turkey must have seen

the top of the long grass waving, for he moved to a safer distance. After a moment he began scratching in the leafy soil, but he seemed a little uneasy and would continually stop to look around him and listen. His bright beady eyes kept watch over the entire landscape the whole time he was feeding.

For quite a while they kept up this game of hide and seek, for, no matter how cautiously they stalked, the wary bird would not allow them to get any nearer. Finally, as though tired of dodging, the great bird took to wing. They watched him rise and fly to the topmost branch of a pine.

"Well, I'm afraid that spoils our chance of taking a close-up this time," sighed the Scoutmaster, "but we'll try again another day.

"I wonder which way the wind is blowing," he added, wetting his finger and holding it up. "From the South," he exclaimed.

The Scouts wanted to know how he could tell.

"The cool side of the finger shows that the wind is blowing from the direction it faces," he replied. "It wouldn't be any use going into the woods if the breeze carried our scent there before us.

The boys could not help admiring the way the Scoutmaster moved through the underbrush. He might have been an Indian, so silently did he go. They stopped at the foot of a red cedar.

"Shall we rest here a while?" he suggested.

Soon a scampering and chattering right overhead attracted their attention. Looking up, they saw two fox squirrels engaged in chasing one another up and down a pine tree, each evading the other with great agility. The furry fellows were jet black, except for the white on ears and nose.

The boys crawled down the bank of a nearby stream and discovered that one of the squirrels had been there to drink. They recognized his track by the distinct pad marks and the pairing of the forefeet. They were larger than those of the grey squirrel.

A little further up the stream the three recognized many other tracks. Evidently opossum, raccoon and mink, also



Wild Turkey tracks



Opossum tracks



Fox Squirrel tracks





*Courtesy of U. S. Soil Conservation Service.*

Beaver Dam on the South Fork of the Park River, North Dakota.

went to drink at the same river.

The experiences of the day had set the boys wondering how the Indians ever got within close range of animals. The Scoutmaster told them that the Indian's close association with all the wild denizens of the woods gave him an intimate knowledge of their habits.

"Indians could imitate the calls of birds and animals so accurately that, almost at will, they could bring game within bow-shot."

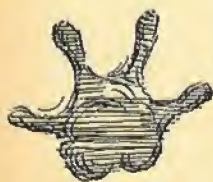
## MUSKRAT

The boys came one day upon a stream winding its way slowly through the woods.

Following the course of the stream the boys suddenly saw the track of a large hind foot nearly covering the print of the small fore. The tail drag was quite distinct and made a decided groove in the soft mud where the animal had entered the water. From the slow gait it was quite apparent that the creature was less at home on land than in water.

"That couldn't be anything but a muskrat," said one of them. "Look here," he continued, pointing to another trail close by, "a mink made this. He must have been after the muskrat."

32



Fore  
Muskrat tracks



## THE BEAVER DAM

Soon the boys came to a cedar swamp. Ploughing through this, they reached higher ground. Picking up several chips that were lying near a stump, they examined them closely.

They were thick and curved, and were cut by no woodsman's axe. They could only be the work of beaver. With their chisel-shaped teeth a pair of beavers can soon fell a good-sized tree.

A little further up they found a clear track. There was no mistaking the pigeon-toed trail of the corpulent creature, with the tail mark appearing on either side.

That night the Scouts returned to the same spot and hid behind a ridge. There was a full moon and the breeze favored them. Soon they heard a splash at the other side of the stream, and a beaver came swimming along with a log in his mouth. He pushed his way energetically towards the dam, and the water, placid before, was now covered with ripples. Nearing the scene of activity the animal dived, carrying the log to the bottom. Other beavers, plasterers, weighed the log down with stones and cemented it with mud. This was a sluggish stream, so the beavers built the dam up from the bottom. Had it been a swift river the animals would have had to build from the bank towards the centre of the stream.

The boys were so engrossed in watching the industrious workers that they forgot to be careful and leaned too far over the ridge. A sounding slap on the water and immediately every beaver disappeared. One of them had seen the boys. That flip of his tail was the danger signal. So the boys decided that they might just as well go home, for the beavers probably wouldn't come back again that night, as long as they stayed there.

33



Fore  
Beaver track







Photo by Brodbeck.

## ON THE SNOW

This was to be their last weekend camp of the year. Starting out after an early breakfast they had not gone far when almost at their feet, a ruffed grouse rose and whirled away. It had ploughed beneath the snow for warmth, and just escaped being stepped on.

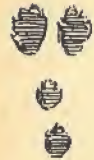
"That fellow has on his winter shoes," said the Scoutmaster, gazing after the bird. The boys looked puzzled, so he told them that in the winter Nature provided the grouse with a hairy growth around his toes, to keep him up on the snow.

At that moment a ball of white bounded across the road. "Was that a rabbit?"

"Yes, it was a Snowshoe. He has a heavy coat of hair covering his hind feet in winter, and so his track in the snow is as large as that of the Jack Rabbit, though the latter is twice his size.

"In the summer he is brown, but as winter approaches, he gradually changes his color, and when the deep snows fall, he is all white. Thus Nature does her best to protect him from his many enemies."

They saw the track of a fox that had evidently been stalking in the vicinity. These appeared in a sheltered spot where the ground was nearly bare. The tracks were sharp and clear and almost in a straight line. There was a certain aristocracy about them—slim, elegant, with the nail marks showing dis-



Snowshoe  
Rabbit  
tracks

tinctly. It was impossible to mistake them for the round, clumsy tracks of a dog.

Suddenly the trail vanished.

"Where did the crafty fellow go?" asked a Scout.

The boys searched around.

"Ah! Here he took a jump to one side."

A little further on, the fox had changed his gait, probably after a short pause to catch some scent on the frosty air.

Then the track showed how cautiously the fox had proceeded, with a slow and stealthy step, until, by deeper imprints in the snow, they could tell where he had made a sudden leap upon some hapless prey. A few drops of blood, and tiny tracks showed the tragic fate of a heedless field mouse. This, however, must have been but the merest appetizer, for Reynard had resumed his quest.

Here and there a body mark on the snow, and the drag of his proud brush, showed how low he had crouched, as he slowly moved forward, seeking every bit of cover all the while. Hiding behind a snow-clad hillock, passing under a bush, but always proceeding in the same direction, the fox had continued to stalk. Again marks in the snow, where he had sprung, with his feet drawn up under him, together with the scattered feathers of a partridge, betokened his success. Then the trail turned, and the occasional drag beside his own track, showed that Reynard had taken his trophy home.

A clump of evergreens nearby drew the boys' attention.

At that moment there was a rustling in the bushes, and the lads caught fleeting glimpses of white tails.

The large tracks of the buck were easy to recognize, while the sets of smaller and slimmer prints were quite evidently made by the doe and her fawn.

Soon the deer trail separated, and the buck went from thicket to thicket in long bounds. At the edge of the timber the trail abruptly stopped. Had he played a trick on them? Searching on both sides of the trail, they found that he had jumped to one side among the bushes, and made off in another direction. Then, circling, he had evidently crossed the lads' trail further back and, following on the other side, watched them from a distance.





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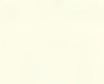
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